

[54] **SOLAR CELL GRID PATTERNS**

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[58] Field of Search **136/89, 206**

[56] **References Cited**

UNITED STATES PATENTS

2,310,365	2/1943	Hansell	136/89
2,320,185	5/1943	Lamb	136/89
2,668,184	2/1954	Taylor et al.	136/89
3,053,926	9/1962	Ben-Sira et al.	136/89
3,340,096	9/1967	Mann et al.	136/89

3,589,946 6/1971 Tarneja et al. 136/89

FOREIGN PATENTS OR APPLICATIONS

277,610 5/1928 United Kingdom 136/89

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[57]

ABSTRACT

A grid pattern for a solar cell of the type including a semiconductive layer doped to a first polarity and a top counter-doped layer. The grid pattern comprises a plurality of concentric conductive grids of selected geometric shapes which are centered about the center of the exposed active surface of the counter-doped layer. Connected to the grids is one or more conductors which extend to the cell's periphery. For the pattern area, the grids and conductors are arranged in the pattern to minimize the maximum distance which any injected majority carriers have to travel to reach any of the grids or conductors. The pattern has a multi-axes symmetry with respect to the cell center to minimize the maximum temperature differentials between points on the cell surface and to provide a more uniform temperature distribution across the cell face.

8 Claims, 10 Drawing Figures

